



# UNITED STATES PATENT AND TRADEMARK OFFICE

SM

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/471,287	12/23/1999	MAKOTO MIYAGI	0557-4877-2	7229
22850	7590	06/16/2004		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER BRINICH, STEPHEN M				
ART UNIT		PAPER NUMBER		
2624				

DATE MAILED: 06/16/2004

61

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/471,287

Applicant(s)

MIYAGI, MAKOTO

Examiner

Stephen M Brinich

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-4,6-12,14-16,18-24 and 27-34 is/are allowed.
- 6) ☒ Claim(s) 1,5,13,17,25 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |



**UNITED STATES DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office**

Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
---------------------------------	-------------	---	---------------------

EXAMINER
----------

ART UNIT	PAPER
----------	-------

11

DATE MAILED:

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner for Patents**

Art Unit: 2624

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments, see Paper #10: page 13, line 18 - page 14, line 10, filed 25 March 2004, with respect to the rejection(s) of claim(s) 1, 5, 13, 17, 25, & 26 under 35 USC §102(a) have been fully considered and are persuasive.

Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made under 35 USC §112.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 5, 13, 17, 25, 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "cutting off corners of each of only single corner square cells facing each other" (claim 1, lines 2-3; claim 5, lines 2-3; claim 13, lines 2-3; claim 17, lines 2-3; claim 25, lines 2-3; and claim 26, lines 2-3) is unclear as to

Art Unit: 2624

which corners and which square cells (the phrase "single corner square cells" is a contradiction in terms) are referenced.

Examiner's best interpretation is that the phrase refers to cutting off one (and only one) corner of each of a defined group of mutually facing square cells.

***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 5, 13, 17, 25, & 26 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant's admitted Prior Art.

Re claims 1, 5, 13, 17, 25, & 26, Applicant's admitted Prior Art (Figures 8B, 8C, 9A, 12) discloses a halftone screen in which the halftone dot cells are formed by cutting off one facing corner of each of two mutually facing square halftone threshold matrices to form non-regular hexagonal threshold matrices and combining sets of the resulting hexagonal matrices into a halftone cell.

***Allowable Subject Matter***

6. Claims 2-4, 6-12, 14-16, 18-24, & 27-34 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 2624

Re claims 2, 6, 14, & 18 (and dependent claims 4, 8, 16, & 20), the art of record does not teach or suggest the recited threshold value arrangements (wherein a distance between respective threshold value setting start pixels in adjacent halftone cells is made as equal as possible) in conjunction with a halftone matrix formed by cutting off facing corners of square halftone threshold matrices to form non-regular hexagonal threshold matrices and combining sets of the resulting hexagonal matrices into a halftone cell.

Re claims 3, 7, 15, & 19, the art of record does not teach or suggest the recited threshold value arrangements (set threshold values for each of the hexagonal cells constructing a single halftone cell are not the same) in conjunction with a halftone matrix formed by cutting off facing corners of square halftone threshold matrices to form non-regular hexagonal threshold matrices and combining sets of the resulting hexagonal matrices into a halftone cell.

Re claims 9, 21, 27, 29, 31, & 33 (and dependent claims 10-12, 22-24, 28, 30, 32, & 34), the art of record does not teach or suggest the recited division of hexagonal cells that are combined into a halftone matrix formed by cutting off two facing corners of square halftone threshold matrices to form non-

Art Unit: 2624

regular hexagonal threshold matrices and combining sets of the resulting hexagonal matrices into a halftone cell.

**Conclusion**

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Brinich at 703-305-4390. The examiner can normally be reached on weekdays 7:00-4:30, alternate Fridays off.

Art Unit: 2624

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2600 Customer Service center at 703-306-0377.

If attempts to contact the examiner and the Customer Service Center are unsuccessful, supervisor David Moore can be contacted at 703-308-7452.

Faxes pertaining to this application should be directed to the Tech Center 2600 official fax number, which is 703-872-9306.

Stephen M Brinich  
Examiner  
Art Unit 2624

smb *Smb*  
June 10, 2004



*THOMAS D.*  
~~THOMAS D.~~ LEE  
PRIMARY EXAMINER